



Differential Pressure Sensor, 0-1MPa, Isolated Construction,
high static pressure 20MPa, 1.5X overpressure

PD790 Series IOT Pressure Sensors Technical Data Sheet

PD790-10M2

Features

- Pressure range 0-1MPa
- F19 mm Differential pressure sensor
- Constant current / Constant Voltage power supply
- Isolated construction, enable to measure various media
- Full stainless steel 316L
- High static pressure 20MPa
- 1.5 times overpressure

Applications

- Industrial process control
- Differential pressure measurement
- Gas, liquid pressure measurement
- Pressure checking meter
- Pressure calibrator
- Venture and eddy-current flow meter

Description

PD790-10M2 is a highly stable and reliable piezo-resistive pressure sensor with wide temperature compensation and zero correction. It contains a highly stable silicon die, stainless steel 316L housing with diameter 19 mm. The measured differential pressure is transmitted onto the silicon die through the 316L diaphragm and inner media. This transforms the measured pressure into an electrical signal.

Product Configuration

Application: Differential Pressure Sensor
Electrical Connector: 100mm Silicon rubber wires

General Specifications*

| Description | Minimum | Typical | Maximum | Unit |
|--------------------------|---------|---------|---------|------------------|
| Pressure Range | 0 | | 1 | MPa |
| Linearity | | ±0.15 | ±0.25 | % Full Scale |
| Repeatability | | ±0.05 | ±0.075 | % Full Scale |
| Hysteresis | | ±0.05 | ±0.075 | % Full Scale |
| Full Scale Output | 60 | | | mV DC |
| Zero Output | | | 3 | mV DC |
| Zero Thermal Error @25°C | | ±0.75 | ±1 | % Full Scale/°C |
| Span Thermal Error @25°C | | ±0.75 | ±1 | % Full Scale/°C |
| Compensated Temp Range | 0 | | 50 | °C |
| Long Term Stability | | ±0.3 | ±0.5 | %Full Scale/year |
| Overpressure | | 1.5 | | xFull Scale |

*General Specifications hold under the following Nominal Conditions



an INFINIT® brand



Differential Pressure Sensor, 0-1MPa, Isolated Construction, high static pressure 20MPa, 1.5X overpressure

PD790 Series IOT Pressure Sensors Technical Data Sheet

PD790-10M2

*Nominal Conditions

| DESCRIPTION | DESCRIPTION |
|---------------------------------------|-----------------------------------|
| Media temperature: (25±1)°C | Environment temperature: (25±1)°C |
| Shock: 0.1g (1m/s ²) Max. | Humidity: (50%±10%)RH |
| Local air pressure: (86-106)kPa | Power supply: (1.5±0.0015)mADC |

Electrical Specifications

| Description | Minimum | Typical | Maximum | Unit |
|-------------------------------|---------|---------|---------|--------|
| Power Supply/Excitation Level | | | 10 | VDC |
| Power Supply Current | | | 2 | mA |
| Input Impedance | 3,000 | | 8,000 | Ω |
| Output Impedance | 3,500 | | 6,000 | Ω |
| Response 10%-90% | | | 1 | msec |
| Zero Drift/Static Pressure | | | ±0.5 | mV/MPa |
| Insulation Resistance 100VDC | | 100 | | MΩ |
| Static Pressure | | | 20 | MPa |

Material Specifications

| Description | Material |
|--------------|----------------------|
| Diaphragm | Stainless Steel 316L |
| Plug Housing | Stainless Steel 316L |
| Pin | Silicone Rubber |
| O-Ring | Viton |

Mechanical Specifications

Weight 0.08 lbs [36.29 g]



an INFINIT[®] brand



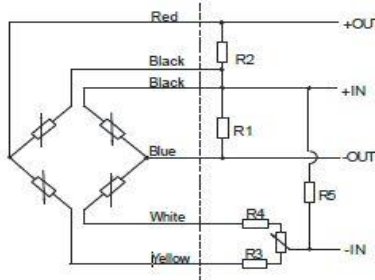
Differential Pressure Sensor, 0-1MPa, Isolated Construction, high static pressure 20MPa, 1.5X overpressure

PD790 Series IOT Pressure Sensors Technical Data Sheet

PD790-10M2

Electrical Connection

| Wire Color | Description |
|------------|-------------|
| Red | +OUT |
| Black | +IN |
| Black | +IN |
| Yellow | -IN |
| White | -IN |
| Blue | -OUT |



Note: The electrical connection method is enclosed with the products.

Environmental Specifications

| | |
|-------------------------|--------------------------------|
| Temperature (Operating) | -40°C to 125°C |
| Temperature (Storage) | -40°C to 125°C |
| Certifications | ROHS Compliant CE Compliant |

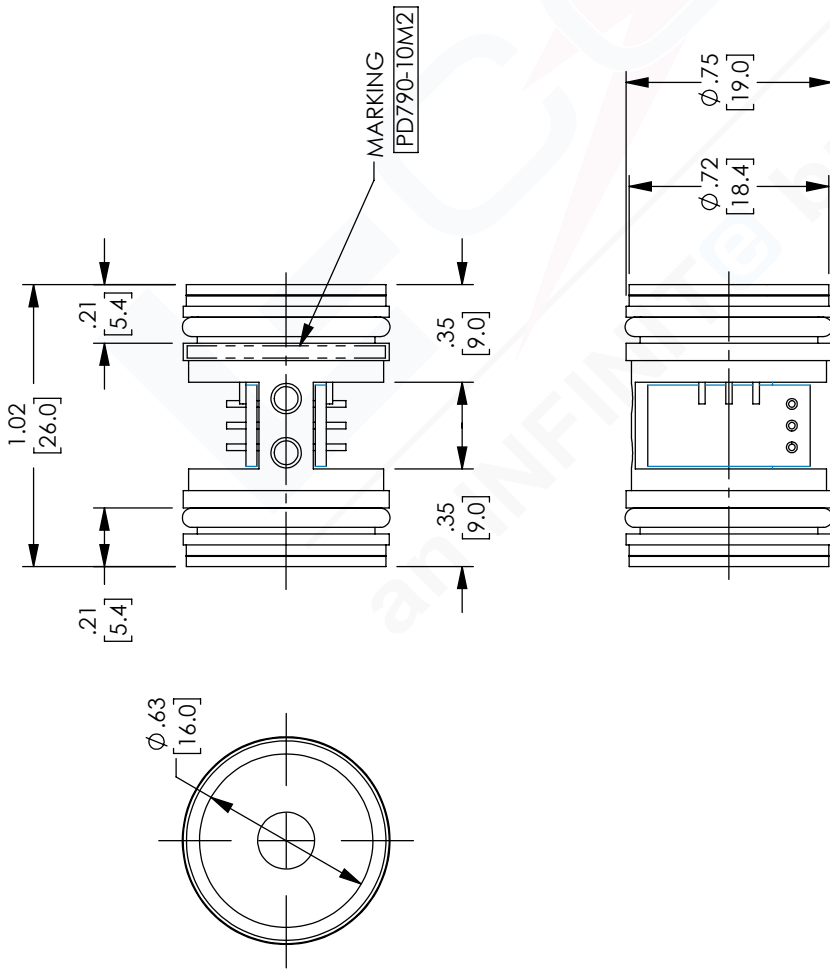
The Infinite Electronics portfolio includes coaxial cable assemblies, connectors, adapters and custom products, as well as our wireless product line which includes antennas, RF amplifiers, lightning and surge protectors, and NEMA rated enclosures.

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. L-com reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. L-com does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and L-com does not assume any liability arising out of the use of any part or documentation.

PD790-10M2 CAD Drawing

Differential Pressure Sensor, 0-1MPa, Isolated Construction,
high static pressure 20MPa, 1.5X overpressure

| REV | DESCRIPTION | DATE | APPROVED |
|-----|-----------------|------------|----------|
| A | INITIAL RELEASE | 05/22/2019 | TO/A |



| | | |
|---|--|--|
| <p>UNLESS OTHERWISE SPECIFIED LENGTH DIMENSIONS ARE IN INCHES DIMENSIONS IN [] ARE MILLIMETERS</p> <p>TOLERANCES: .XX±.01 [.25] ± 1/32 .XXX±.005 [.13] ANGLES ± 1°</p> <p>ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.</p> <p>THIRD-ANGLE PROJECTION</p> | <p>an INFINITI brand</p> <p>50 High Street, West Mill, 3rd Floor, Suite #30 North Andover, MA 01845 USA Phone: 1 800 341 5266 1 978 682 6936 Fax: 1 978 689 9484 www.L-com.com e-mail: CustomerService@L-com.com</p> | <p>THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF L-COM. ALL RIGHTS RESERVED.</p> <p>SHEET 1 OF 1</p> <p>SCALE N/A</p> |
| <p>SIZE [CAGE] DRAWN BY</p> <p>A 43321 DZINN</p> | <p>PART NUMBER</p> <p>PD790-10M2</p> | <p>REV</p> <p>A</p> |

THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.